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EXAMINER

STERRETT, JONATHAN G

ART UNIT	PAPER NUMBER
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3623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/904,528

Applicant(s)

OKAMOTO ET.AL

Examiner

Jonathan G. Sterrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 7-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 24-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 June 2007 has been entered.

2. This Non-Final Office Action is responsive to the amendment of 12 June 2007. **Claims 1-6 and 24-36** are pending in the application. Claims 7-23 stand as withdrawn from consideration.

Response to Amendments

3. The 112 2nd rejection of **Claims 1-6 and 24-36** is withdrawn based on the amendments to **Claims 1, 5, 6 and 24**.

Response to Arguments

4. The applicant's arguments have been fully considered, but they are not persuasive.

5. The applicant argues on page 18 and 19 with regards to independent claims 1, 5, 6 and 24 that Pong and Kaneko do not teach obtaining information

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from an image of the customer without determining a personal identity of the customer. In support of this argument, the applicant argues that Pong does not teach determining any attribute of the customer. In further support of this argument, the applicant argues that Kaneko does not teach using image attribute of the customer to determine an attribute of the customer. The applicant further argues that the inventions of Pong and Kaneko are incompatible, because Pong is performing facial recognition for identity purposes and Kaneko is using facial characteristics to recommend certain products.

The examiner respectfully disagrees.

Pong teaches a facial recognition system in the context of a person using an automated self service facility. Facial recognition systems use image information of a person's facial attributes to determine a person's identity – this utilization of facial attributes is used to match the unique characteristics of a person's face to their identity. The goal in Pong is to ensure that the person is authorized to make a purchase based on the attributes of that person's face. Thus the examiner respectfully disagrees that Pong does not teach determining an attribute of the customer, since the unique characteristic of a person's face is an attribute of the customer, according to the broadest reasonable interpretation.

Kaneko also teaches obtaining attributes of a person's face, for the purpose of recommending products to that person. Kaneko is not concerned with validating those facial characteristics with an identity (i.e. "this face is the face of Mr. X or Ms. Y"). Kaneko takes the facial attributes for the purpose of recommending a product to the person, based on the shape of their face. Thus

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the examiner respectfully disagrees that Kaneko does not teach using image information to determine an attribute of the customer. On page 19 paragraph 3, the applicant acknowledges that Kaneko determines shape, width and color of a person's face – these are attributes determined from the image information. It is the stated goal of Kaneko's information to use image information to recommend products to a person based on the shape of their face, so obtaining attribute information from a person's face is necessary for the functioning of Kaneko's invention.

Finally, the applicant argues that combining Pong and Kaneko is improper because Kaneko's teaching destroys the functioning of Pong. However, this assertion fails to take into account the preferred embodiment of Pong that does not perform facial recognition to determine an identity, but rather uses a transponder to determine the person's identity. In this case the combination of Kaneko, which determines attributes of a person without determining their identity with Pong does not defeat either Pong's or Kaneko's intended purpose.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 5, 6, 24, 25, 26, 28 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pong US 6,237,647 (hereinafter **Pong**) in view of Kaneko US 6,332, 139 (hereinafter **Kaneko**).

Regarding **Claim 24**, Pong teaches:

a first input unit receiving information of an item purchased in the shop by said customer; and

column 4 line 13-17, the database receives the information of the item purchases (i.e. fuel) purchased in the refueling shop by the customer.

a first storing section storing said information of said item received and said attribute of said customer determined, said information and said attribute being correlated with each other.

Column 2 line 44-46, the vision system confirms the facial identity of the system with the transponder information when the person is driving up to refill their car.

Column 4 line 13-15, Once the person has finished refueling, the database stores the billing information for the transaction of fuel purchased by the

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customer. Since the system is performing the billing function, it correlates the identity of the customer (based on their image) with the amount of fuel they purchased. See Figure 2 #28.

In a preferred embodiment, Pong does not teach using cameras to identify customers (i.e. Pong teaches using a transponder that identifies the customer), thus Pong does not teach:

a camera obtaining image information of a customer in a shop to generate an image signal indicating an image of said customer;

a first processor receiving said image signal to determine an attribute of said customer on the basis of information obtained from the image without determining a personal identity of a particular individual in the image;

Kaneko teaches:

a camera obtaining image information of a customer in a shop to generate an image signal indicating an image of said customer;

column 33 line 24-27, a camera (see also col 32 line 45-47), extracts image information from a customer

a first processor receiving said image signal to determine an attribute of said customer on the basis of information obtained from the image without determining a personal identity of a particular individual in the image;

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column 33 line 25-30, the image information determines attributes from a person's face (i.e. for the purpose of recommending products to that person based on facial characteristics), without determining a personal identity of a particular individual.

Kaneko thus teaches obtaining non-unique information from a person (i.e. facial characteristics without determining a customer's identity).

Kaneko teaches where that information can be used to tailor products for a person (column 33 line 30-35) based on the person's age and gender.

One of ordinary skill in the art at the time of the invention would modify the teachings of Pong, regarding using system that serves customers in a retail marketing setting (where Pong's invention uses a transponder to provide identification without using a facial recognition system) to include the step of using the facial recognition system to obtain information related to that person but not unique to them, as taught by Kaneko, because it would enable products to be tailored for that person based on their personal, but not personally identifying, characteristics.

Claims 1, 5 and 6 recite limitations similar to those recited by the rejection of **Claim 24**, and are therefore rejected under the same rationale.

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Regarding **Claim 25**, Pong teaches:

wherein said camera is arranged at a predetermined position and

column 13 line 35-40, the camera is arranged at a predetermined position

(i.e. at the refueling station)

obtains image information of said customer at a predetermined

timing.

Column 2 line 40-45, the system uses the facial recognition to confirm the individual's identity with the transponder. This occurs prior to the refueling of the vehicle (i.e. at a predetermined timing).

Regarding **Claim 26**, Pong teaches:

wherein said position is suitable for obtaining image information of a

face of said customer.

Column 2 line 45-46, the camera obtains image information of the face of the customer since it is performing facial recognition, thus the position of the camera is suitable for obtaining image information from the customer's face.

Regarding **Claim 28**, Pong teaches:

wherein said information of said item includes a name of said item.

Column 7 line 1-5, information regarding items purchased by the customer includes names of several items, not only including fuel but other items

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purchased by the customer at the convenience store associated with the refueling station.

Regarding **Claim 30**, Pong teaches:

further comprising a second input unit receiving an attribute of said customer,

column 6 line 40-45, the attribute of the customer from the transponder tag is the customer's account number.

wherein said first storing section further stores an attribute input via a second input unit and different from said attribute determined in said first processor.

Column 7 line 12-13, the customer database can be updated to include changes in the customer information – see also column 8 line 40-45, the customer can input limited commands through the transponder.

8. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Pong US 6,237,647 (hereinafter **Pong**) in view of Kaneko US 6,332,139 (hereinafter **Kaneko**).

Regarding **Claim 27**, Pong teaches where the vision system above identifies a person based on their facial characteristics (i.e. facial recognition). Pong teaches that the entire customer interaction can be monitored by the

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system, so that personal reminders (i.e. specific to that individual) can be made.

For example – col 5 line 9-12, Pong teaches an example where a person can be directed to pick up his dry cleaning.

However, Pong does not teach where the facial recognition system provides for a determination as per:

wherein said attribute includes at least one of gender and age.

However, it is old and well known in the art where facial recognition can provide for both gender and age, as taught by Kaneko.

Kaneko teaches that his system can provide for a determination of age and gender and that this information (i.e. age and gender) helps to determine a product suitable for a customer (column 33 line 25-30). Kaneko teaches that his system is suitable for monitoring the inside of a store to understand the situation in a store (column 2 line 11-13).

Pong and Kaneko both address the use of facial recognition systems in identifying customers to improve the customer's shopping experience, thus both Pong and Kaneko are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, where facial recognition is used to

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determine the identity of a customer, to include the teachings of Kaneko, where the facial information is used to determine demographic information and related product characteristics for that demographic information, because it would automatically provide product recommendations to that customer based on their age and gender, and thus improve their shopping experience.

9. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over Pong US 6,237,647 (hereinafter **Pong**) in view of Kaneko US 6,332, 139 (hereinafter **Kaneko**).

Regarding **Claim 29**, Pong teaches the use of a facial recognition system in conjunction with a refueling system to provide an automated buying experience for a customer. Pong does not teach where the elements of his system are installed inside of a shop (i.e. a store) as per:

wherein said camera, said first processor, said first input unit and said first storing section are installed inside said shop.

However, it is old and well known in the art for a buying experience to be conducted entirely inside of a store.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, to include where his facial recognition and associated elements are installed inside of a store, because it

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would improve the shopping experience by automatically identifying the customer so that personal shopping recommendations could be made to that customer.

10. **Claims 2, 3, 4, 31, 32-36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Pong US 6,237,647 (hereinafter **Pong**) in view of Kaneko US 6,332, 139 (hereinafter **Kaneko**) and further in view of Lu US 5,331,544 (hereinafter **Lu**).

Regarding **Claim 2**, Pong teaches:

wherein said recording block further records a second preference of said customer,

column 8 line 43-47, the transponder can record changes in the customer's preferences for that visit.

said second preference being correlated with said data of said item obtained, said second preference being determined through a human perception.

column 8 line 43-47, these changes can be input by the customer (i.e. determined through that customer's own human perception). The attribute is correlated with the customer's purchase in that if the customer is buying fuel, but wants a different fuel (e.g. different octane rating), the system correlates the change with what the customer wants to buy.

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Pong does not teach where an attribute of a customer is determined by a human perception and where that attribute of the customer is correlated with the item obtained.

Lu teaches where an attribute of a customer is determined by a human perception and where that attribute of the customer is correlated with the item obtained. (column 9 line 25-30) The clerk determines that the signature of the customer (an attribute of the customer) is determined to be correct, according to what is on their store ID card. When the person makes the purchase using this check, the purchase is correlated with the person's identity. Note that Lu teaches using the store ID card to keep track of frequent shoppers (i.e. to correlate shoppers with their purchases) – see column 2 line 10-15).

Lu teaches where having an attribute based on the human perception of a customer's identity can prevent authorized use of a check card to prevent financial loss to the store (column 9 line 40-45).

Both Pong and Lu address the use of computers to track customer activities in a retail setting, thus both Pong and Lu are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, regarding using customer recognition systems to identify customers, to include the step determining a

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customer attribute through a human perception, because it would provide a way to prevent financial loss to a store.

Regarding **Claim 31**, Pong teaches a purchasing recognition system to provide a system for complete monitoring and automation of a customer's buying experience. Pong does not teach:

further comprising a second processor providing a data analysis based on said information of said item recorded and said attribute of said customer,

wherein said camera, said first processor, said first input unit and said first storing section are arranged inside said shop as an internal device and said second processor is arranged outside said shop and capable of communicating with said internal device.

Lu teaches:

further comprising a second processor providing a data analysis based on said information of said item recorded and said attribute of said customer,

column 4 line 35-40, a central computer (i.e. a second processor) stores the market research data from a plurality of stores. –see also column 5 line 9-14, the data collected is used for market research, i.e. providing data analysis to understand shopper purchasing behavior.

wherein said camera, said first processor, said first input unit and said first storing section are arranged inside said shop as an internal

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device and said second processor is arranged outside said shop and capable of communicating with said internal device

column 4 line 56-60, the camera, first processor, input unit and storing section are located inside the store –see also column 8 line 16-20.

Column 5 line 13-14, the central computer for collecting the data is connected to the individual stores (i.e. can communicate with them since it is collecting the data.

Lu teaches that his system provides a way to determine shopping frequency of customers at a store so that retailers can study shopping versus non shopping behaviour (column 1 line 38-42) and that this information is valuable for market research studies (column 2 line 11-15).

Both Pong and Lu address the use of computers to track customer activities in a retail setting, thus both Pong and Lu are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, regarding using computer systems to track customer purchases, to include the step of collecting the data in a central computer from several stores, because it would provide a way to conduct market research for a plurality of stores connected to the central computer so as to understand shopper purchasing behavior for all these connected stores.

Claims 3 and 4 recite limitations similar to those addressed by the rejection of **Claim 31**, and are therefore rejected under the same rationale.

Regarding **Claims 32 and 34**, Pong teaches customer recognition system (i.e. through a transponder) to identify customers who are purchasing items from a store. Pong's system is connected to a database so that customer purchases can be billed to the customer (i.e. the customer visits that result in sales are counted so that accurate billing is made to the customer. Pong further teaches that his system is designed to provide complete monitoring and control of the customer shopping experience (column 5 line 13-15).

While Pong teaches obtaining identification information of a customer, as discussed above, Pong does not teach two different cameras to distinguish between customers who have made and purchase and those who have not made a purchase as per:

Wherein said camera includes a first camera obtaining face information of a customer having entered said shop and
a second camera obtaining image information of a customer having purchased an item;
said first processor receives said image signal generated by said first camera and an image signal generated by said second camera, to determine an attribute of a customer having an image indicated by an

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image signal generated by said first camera but not by any image signal generated by said second camera; and (as per claims 32 and 34)

said first storing section further stores information indicating that said customer is a non-purchaser, said information being added to said determined attribute of said customer (as per claim 32).

said first storing section further stores information indicating that said customer is a non-purchaser, said information being added to said determined attribute of said customer (as per claim 34).

Lu teaches using cameras to distinguish between purchasing and non-purchasing customers as per:

Wherein said camera includes a first camera obtaining face information of a customer having entered said shop and

Column 9 line 54-59, shoppers who have entered the shop and are looking at a display have their face captured by a camera.

a second camera obtaining image information of a customer having purchased an item;

column 4 line 55-60, customers who are purchasing an item (i.e. at the checkout lane) have their facial images captured by a camera.

said first processor receives said image signal generated by said first camera and an image signal generated by said second camera, to determine an attribute of a customer having an image indicated by an

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image signal generated by said first camera but not by any image signal generated by said second camera; and

Column 9 line 54-59, customers who look at the display have their facial images captured for identification (i.e. their attribute, their ID is determined from the image captured by this second camera).

said first storing section further stores information indicating that said customer

is a non-purchaser (as per Claim 32, and)

is a purchaser (as per Claim 34),

said information being added to said determined attribute of said customer.

Column 3 line 35-40, the system is designed to correlate those customers looking at the display in the store with those who have made a purchase. The shoppers whose faces are imaged at the display are identified (i.e. their attribute, their identity is determined). Lu's system stores the information for both purchasers and non purchasers in order to determine the effectiveness of the in-store display towards customers making a purchase. Lu's system is correlating purchasing behavior of both purchasers and non purchases (column 3 line 41-44).

Lu teaches that his system provides a way to determine shopping frequency of customers at a store so that retailers can study shopping versus

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non shopping behaviour (column 1 line 38-42) and that this information is valuable for market research studies (column 2 line 11-15).

Both Pong and Lu address the use of computers to track customer activities in a retail setting, thus both Pong and Lu are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, regarding using customer recognition systems to identify customers, to include the step of using two different camera systems to determine which customers are non-purchasers, as per Claim 32, and which customers are purchasers, as per Claim 34, because it would provide valuable information for retail marketing research studies to improve the purchase rate of customers.

Regarding **Claim 33**, Pong teaches the customer recognition system as discussed above, but does not teach:

wherein said first camera is positioned in a vicinity of an entrance of said shop and

said second camera is positioned in a vicinity of a cash desk of said shop.

Lu teaches a second camera positioned in a vicinity of a cash desk of said shop, as discussed above, to capture the facial image of customers who are

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purchasing items. Lu teaches a second camera that is positioned in vicinity of a store display.

Lu teaches that his system provides a way to determine shopping frequency of customers at a store so that retailers can study shopping versus non shopping behaviour (column 1 line 38-42) and that this information is valuable for market research studies (column 2 line 11-15).

Both Pong and Lu address the use of computers to track customer activities in a retail setting, thus both Pong and Lu are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, regarding using customer recognition systems to identify customers, to include the step of using two different camera systems to determine which customers are non-purchasers, and which customers are purchasers because it would provide valuable information for retail marketing research studies to improve the purchase rate of customers.

While Lu does not explicitly teach a first camera in the vicinity of the store entrance, it is old and well known in the art of retail for displays to be positioned at the entrance of a store. This is done to entice customers to enter the shop.

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the collective teachings of Pong and Lu, regarding using two different cameras to conduct market research to determine the effectiveness of store displays on purchase behavior, to include the step of positioning a camera in the vicinity of a store display in the vicinity of the entrance of a store, because it would provide an evaluation of how effective the store entrance displays were in enticing customers to make a purchase.

Regarding **Claim 35**, Pong teaches using a customer recognition system to validate a customer's identity when they are making a purchase. Pong does not teach counting a frequency of customer's visit to a store as per:

a second recording block recording an image signal representative of a customer of a shop and a number of said customer's appearance in said shop, said image signal representative of said customer and said number being correlated with each other; and a third processor incrementing by one said number correlated with said image signal recorded in said second recording block and found to match said image signal generated by said camera.

Lu teaches counting the frequency of a customer being in a shop as per:

a second recording block recording an image signal representative of a customer of a shop and a number of said customer's appearance in said shop, said image signal representative of said customer and said number being correlated with each other; and a third processor

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incrementing by one said number correlated with said image signal recorded in said second recording block and found to match said image signal generated by said camera.

Column 2 line 10-12, Lu teaches counting not only the frequency of shoppers who appear in a shop but also a temporal distribution of their visits.

Column 2 line 15-20, The shoppers appearance in a shop is correlated with that individual customer so that an analysis can be made of the customer's purchasing behavior. See also column 1 line 38-42, the visits of frequent shoppers (i.e. the number of their visits to a store) is used in an analysis of their average purchase amount.

Lu teaches that his system provides a way to determine shopping frequency of customers at a store so that retailers can study shopping versus non shopping behaviour (column 1 line 38-42) and that this information is valuable for market research studies (column 2 line 11-15).

Both Pong and Lu address the use of computers to track customer activities in a retail setting, thus both Pong and Lu are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, regarding using customer recognition systems to identify customers, to include the step counting the frequency of shoppers visiting the store because it would provide valuable

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information for retail marketing research studies to understand the shopping behavior of customers.

Regarding **Claim 36**, Pong teaches a system that uses a customer recognition system to identify existing customers. Pong does not teach adding a previously unrecognized customer as per:

wherein said third processor additionally records in said second recording block said image signal of said customer generated by said camera if said image signal of said customer generated by said camera is not present in said second recording block.

Lu teaches recording images of customers that have not been previously recorded or recognized as per:

wherein said third processor additionally records in said second recording block said image signal of said customer generated by said camera if said image signal of said customer generated by said camera is not present in said second recording block.

Column 8 line 32-36, customers images may be used to populate a database if those customers appear in the store so that their images are captured by the camera. These images are used to populate a database in order to determine the frequency of shoppers' appearances and to correlate this with their purchases.

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Lu teaches that his system provides a way to determine shopping frequency of customers at a store so that retailers can study shopping versus non shopping behaviour (column 1 line 38-42) and that this information is valuable for market research studies (column 2 line 11-15).

Both Pong and Lu address the use of computers to track customer activities in a retail setting, thus both Pong and Lu are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Pong, regarding using customer recognition systems to identify customers, to include the step of populating a database of customer images to track the appearance and buying behavior of these customers because it would provide valuable information for retail marketing research studies to understand the shopping behavior of customers.

Conclusion


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGS 8-19-2007



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